

Exhibit I

The Sequence Manipulation Suite: Codon Usage

Results for 1986 residue sequence "gp100" starting "atggatctgg".

AmAcid	Codon	Number	/1000	Fraction ..
Gly	GGG	15	22.66	0.25
Gly	GGA	10	15.11	0.17
Gly	GGT	20	30.21	0.33
Gly	GGC	15	22.66	0.25
Glu	GAG	19	28.7	0.63
Glu	GAA	11	16.62	0.37
Asp	GAT	12	18.13	0.55
Asp	GAC	10	15.11	0.45
Val	GTG	32	48.34	0.52
Val	GTA	5	7.55	0.08
Val	GTT	9	13.6	0.15
Val	GTC	16	24.17	0.26
Ala	GCG	1	1.51	0.02
Ala	GCA	14	21.15	0.3
Ala	GCT	15	22.66	0.32
Ala	GCC	17	25.68	0.36
Arg	AGG	6	9.06	0.23
Arg	AGA	10	15.11	0.38
Ser	AGT	8	12.08	0.13
Ser	AGC	16	24.17	0.26
Lys	AAG	10	15.11	0.77
Lys	AAA	3	4.53	0.23
Asn	AAI	7	10.57	0.5
Asn	AAC	7	10.57	0.5
Met	ATG	13	19.64	1
Ile	ATA	4	6.04	0.15
Ile	ATT	10	15.11	0.37
Ile	ATC	13	19.64	0.48
Thr	ACG	1	1.51	0.02
Thr	ACA	22	33.23	0.37
Thr	ACT	16	24.17	0.27
Thr	ACC	20	30.21	0.34
Trp	TGG	13	19.64	1
End	TGA	1	1.51	1
Cys	TGT	3	4.53	0.21
Cys	TGC	11	16.62	0.79
End	TAG	0	0	0
End	TAA	0	0	0
Tyr	TAT	8	12.08	0.62
Tyr	TAC	5	7.55	0.38
Leu	TTG	9	13.6	0.13
Leu	TTA	1	1.51	0.01
Phe	TTT	5	7.55	0.38
Phe	TTC	8	12.08	0.62
Ser	TCG	2	3.02	0.03
Ser	TCA	7	10.57	0.11

Ser	TCT	13	19.64	0.21
Ser	TCC	16	24.17	0.26
Arg	CGG	5	7.55	0.19
Arg	CGA	1	1.51	0.04
Arg	CGT	1	1.51	0.04
Arg	CGC	3	4.53	0.12
Gln	CAG	30	45.32	0.75
Gln	CAA	10	15.11	0.25
His	CAT	6	9.06	0.55
His	CAC	5	7.55	0.45
Leu	CTG	33	49.85	0.49
Leu	CTA	5	7.55	0.07
Leu	CTT	11	16.62	0.16
Leu	CTC	9	13.6	0.13
Pro	CCG	2	3.02	0.04
Pro	CCA	18	27.19	0.33
Pro	CCT	21	31.72	0.39
Pro	CCC	13	19.64	0.24